
**Coal Gasification:
What Does it Mean for Wyoming?**



**Siting and Environmental Considerations
of New IGCC Technology**

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Social, Economic and Environmental Safeguards



- ◆ Early Planning with the Agency
 - Air Quality
 - Water Quality
 - Solid and Hazardous Waste
 - Land Quality
 - Industrial Siting



Air Quality

- ◆ Currently No IGCC Plants Permitted in Wyoming
- ◆ IGCC Generally have Lower Emissions than Pulverized Coal Plants
- ◆ Project Evaluation (Completeness Review, Technical Review and Public Comment)
- ◆ Air Pollutants Evaluated
 - Prevention of Significant Deterioration (PSD) Pollutants
 - NO_x, SO₂, PM, CO, VOCs
 - Plus HAP and Hg

Air Quality



- ◆ Rigorous BACT Process
 - No Default BACT Determination (Case by Case Evaluation)
 - BACT Demonstration Required for Each Pollutant
 - Technology for Each Pollutant Evaluated

- ◆ Monitoring and Compliance

- ◆ Lower Greenhouse Gas Emissions
 - W.S. 35-11-213 “Restrictions on state regulations related to greenhouse gas emissions.”

 - Can Be Addressed Through Voluntary Initiatives

Water Quality



- ◆ Stormwater
 - Construction and Industrial
 - ◆ Control Measures (BMPs) for Runoff From the Facility
- ◆ Discharge of Wastewater
 - Surface Discharge
 - Subsurface Discharge
- ◆ Permits to Construct and Operate
- ◆ Groundwater Review
 - CO2 Sequestration
 - ◆ No Potential as Future Drinking Water Source
 - ◆ Unsuitable Formation Because of Presence of Hydrocarbons



Solid and Hazardous Waste

◆ Disposal Issues

■ Municipal Waste

- Managed at the Local Landfill

■ Fly Ash

- Managed in an Industrial Landfill as Solid Waste if not Within the Mine Boundary
- If Within the Mine Boundary Regulated Under the LQD Mine Permit
- Groundwater Monitoring for Metals



Land Quality

- ◆ Permitting associated with the Mining Activity
 - Mine Mouth Operation

- ◆ Disposal of fly ash if within the mine boundary
 - Most Happen Off-site



Industrial Siting

- ◆ Division within the DEQ
 - Large Industrial Projects (>\$163.3 Million)
- ◆ Industrial Siting Council
- ◆ Came About Because of Lodging Issues
 - Associated with Temporary Work Force in 60's and 70's with Large Construction Projects
 - “Gillette Syndrome”

Industrial Siting



■ Purpose:

- Mechanism for Applicants to Discuss Proposed Facilities with All Local Governments Potentially Affected by the Project
- To Provide Affected Local Governments with Additional Tax Revenues for Mitigation of Impacts
- To Provide Technical Assistance to Local Governments

Industrial Siting



- ◆ Requirements
 - Construction details
 - Timeline
 - Construction Costs
 - Nature and Location
 - Company Information
 - Safety Procedures
 - Workforce Details
 - Use of Local Workers
 - Population Increase Estimate
 - Additional Revenue Estimate (Local Governments)
 - Socio-economic Impact Study
 - List of Required Permits
 - Water Supply Source
 - Archeology and Historical Surveys

Industrial Siting



- ◆ ISD Obtains Information and Recommendations From
 - WYDOT
 - Public Service Commission (Regulate Metered Sale of Electricity)
 - Game and Fish (No regulatory authority therefore identify concerns and bring to the ISC)
 - SHPO - Archeology
 - Dept. of Health
 - Department of Education
 - Dept. of Work Force Services
 - Dept. of Employment
 - State Engineer
 - State Geologist
 - Dept. of Agriculture
 - Dept. of Environmental Quality
 - University of Wyoming
 - Dept. of Revenue
 - Wyoming Business Council



Industrial Siting

- ◆ Quarterly Reporting Requirements

- ◆ Annual Reporting Requirements
 - Construction
 - Operation

Social, Economic and Environmental Safeguards



Discussion/Questions